

Pope (John H.)

"The 'Struggle for Existence' has rapidly become a watchword of the day."—*Haeckel*.

PRESIDENT'S ANNUAL ADDRESS

BEFORE THE

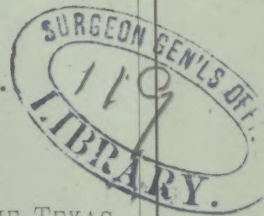
TEXAS STATE MEDICAL
ASSOCIATION.

AT ITS

Twelfth Annual Session, Brenham, Texas, April 7, 1880.

BY

JOHN H. POPE, M. D.



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PRESIDENT'S ANNUAL ADDRESS.

Ladies and Gentlemen, and Fellow Members:—

I have had many anxious thoughts about this occasion. For, while to us, as an Association, this mass meeting of the people and the physicians is one of the most gratifying features of our annual sessions, and while I feel the exultation as a member of the society, the responsibility it places upon me causes a feeling not altogether pleasant.

In selecting a subject suitable for this evening, I have been guided by the earnest desire to find one that would be of interest to all my hearers, of whatever class, and independently of my own thoughts. I was met at the very threshold of my search by a subject that seemed to me to rise above all those around it. All others seemed subordinate to it. All others seemed to acknowledge that this was entitled to first consideration. This thing of supreme importance, is The Struggle for Existence¹; or to state it differently, The Love of Life and Pleasure and the Dread of Pain and Death.

The instinct of self-protection is so strong that it has passed into proverb, that self-preservation is the first law of nature. We feel, we know we have a right to live. I have no right to take my fellow-man's life, nor he mine, nor has either of us the liberty to wantonly inflict pain and suffering on the other. The right is natural and inalienable—that we have to defend

ourselves against pain and death. The wonderful depth of this love of life! It is the supremest proof of a faith, It is the last test of a love. "Greater love hath no man than this—that he would lay down his life for his friend." Patriotism may sweeten the naturally bitter cup of death; and you have seen sons of a state "crowd the road to death as to a festival." But analyze the feeling. It had its origin in love of individual life—the struggle for individual existence. It is the same feeling, modified by the condition of society, in which the life of the individual is subordinate to the life of the many. Religion makes no stronger appeal to us than when it promises eternal life with pleasure, or threatens with never ending pain and the death that never dies. It is a law of nature. The vegetable kingdom obeys it. If we have a vine growing in a dark room into which the sunlight can enter by only one opening, the vine will be seen growing toward that opening, finally, if possible to merge from it—by some guidance seeking conditions most favorable to its existence.

The smallest infusorium that seems to go about at random, can be seen to attach itself to something that will nourish it. Its power to preserve itself extends no farther. It cannot defend itself, and is as apt to go into the clutches of its enemy as its friend. When we rise high enough in the scale of being to find an animal capable of conduct, or of adapting its acts to ends, we see a creature that avoids all large objects as enemies. A little higher and we find them discriminating between what threatens danger and what does not. Higher still there are those able to defend themselves, or attack and overcome their prey. And when we come to man, we find the savage engaged in the chase or defending his hunting-grounds, guided by the instinct to preserve himself. In civilized man the struggle seems intenser. All his talents, his ingenuity of invention, his energy seem directed first to preserving his own life and perpetuating that of his race. And so from the lowest to the highest of animate creation; from the insect to

the prince; from the king on his throne with his army about him, symbolizing in his crown the life of an empire, to the moth that would hide itself in his purple robes—all alike tell the story of the dread of pain and the love of life. Aye, and the instinct is not a base one. We see it pictured on the agonized brow of the God-man in Gethsemane, and we hear it in the prayer that quivers from his lips, "Let this cup pass from me."

In this love of life and dread of pain originated the Science and Art of Medicine. Here was born the goddess at whose shrine we are met to worship. Did we not desire to live longer, there would be no physicians; did we not dread pain and suffering there had been no medicine.

What is it we call pain that we should dread it so? Books have been written on the subject of the mystery of pain, the conservatism of pain, etc.². I have not time to enter minutely into the discussion. It appears to me the truth is about this: Pain is the consciousness of *injury*. The direction or direct tendency of it is toward death³. It often is indirectly the means of saving life. A perfect life is one without pain (*dis-ease*), one in which all the functions of every organ are normally exercised. Any less than this is so much tendency toward death and is disease. Over-exercise of any function brings on exhaustion which tends to death and induces pain. Thus pain pointing to the seat of injury or disease—the point of attack of the enemy death—leads to relief and restoration to health. I burn my finger: there is death or destruction of a certain amount of tissue. The pain warns me to protect my hand, and it may be my whole body for fear of the death of it all. Thus pain is the evidence of the death of a certain or uncertain amount of tissue, but it warns against a greater degree of destruction. The vidette of an army may be killed: there is death of just that much of the army; but the gun that slays him warns the army of the enemy's approach.

What is life that we should love it so? The physiologist⁴ would define our material life as "the *ensemble* of the functions

that resist death." Our frames are made up of various organs having functions of greater or less importance in the assembly of functions that we call life. It is one of the mysteries of life that it is limited between certain extremes. Why is it that the forces set to work in this frame do not go on working perpetually? At first, they not only repair the wear of the frame, but its strength and power of endurance are increased. Why is it that nature not only arrests this growth after a certain time, but will not repair the parts destroyed by use—allows the various organs to wear out, until finally they are incapable of performing their functions and death reigns where erst life was king? These frames seem battlegrounds between the powers of life and death.

In order that finite minds may take cognizance of life, it is necessary at least that it shall be manifested in some material or frame. The simplest manifestation of life is when the Biologist places under the lens of his microscope, a speck of protoplasm and sees it move without organs of locomotion, take food without a mouth, digest and nourish without a stomach⁵. The little thing nourishes, grows, multiplies—and the Biologist calls this living.

Between this and the highest development, man, there are almost countless grades of complicated organization. From the humble amœba that blindly blunders about in his struggle for existence—only one in ten thousand arriving at the age of maturity—through an ever-increasing differentiation marked by cell-division and subdivision; differentiation into muscles that give new powers, nerves that co-ordinate their movements to a common purpose; blood-vessels that carry nourishing fluids to feed these tissues at their door, the development culminates in man.

So much for the machine, whence the force that moves it—so much for the frame whence the life? Science traces it to solar radiation⁶ (heat and light). Beyond this science has not gone. The most important discovery of modern science doubtless is the Law of the Conservation

of Force—that which the great Faraday⁷ called “the highest law in physical science which our faculties permit us to perceive.” It demonstrates the indestructibility of Force; that nature wastes nothing; that Heat, Motion, Electricity, Light, Magnetism, Chemical affinity—which we are pleased to call by different names—are but the same, are all “convertible material affections;” and that the forces we call vital are but manifestations of the same force that, in another instance, we call chemical affinity. All the above named affections are convertible one into another, and not one jot or tittle is thereby added to or taken from the force. The amount of power or motion in your steam-engine is in exact proportion to the heat applied; and the heat generated by the combustion of the coal or wood is in direct proportion to forces that nature has expended in growing that wood and forming that coal. Applying the law to the vital functions, we find that the Creator has not made a new force especially for vegetables and animals. The difference is not in the force but in the machine through which it is manifested—or in the germ which, so to speak, superintends and directs the work⁹.

Prof. LeConte has beautifully illustrated the conversion of Light, Heat, etc., into animal life, by the analogy of four planes of material existence⁹. The first or lowest plane comprises the simple elements, such as Hydrogen, Oxygen, Nitrogen, Carbon, etc. So long as they remain in this plane they are only subject to mechanical force. But when under the influence of Light, Chemical affinity binds two or more of them together to make a new compound, the 2nd plane is occupied. Light is converted into its equivalent of Chemical affinity and the simple elements have been lifted to a higher plane of existence.

The 3rd plane is vegetable life. Here the germ or seed comes on the stage and directs the movements of the players, and we see the drama of vegetable life. Heat, Light and chemical affinity play vegetable assimilability. Chemical compounds in the earth and air are decomposed, the elements go to form

the constituents of the vegetable—as Starch, Gum, Chlorophyll, etc—and the force then let loose is appropriated to vegetable life. Thus one plane higher has been reached.

The 4th plane is that of animal life. The germ of this life directs the work done by the force which comes from the sun. Animals feed on vegetables or on other animals. Thus they obtain an amount of force that has been raised up ready-made for them. In the destruction of their own tissue from which a large proportion of the animal's vital force is derived, the resulting compounds are chemical or such as belong to the 2nd plane. But they were obtained from the 3rd or the 4th plane. Now the power or force developed or let loose, by the bodies or compounds falling to the 2nd plane is necessarily greater than that which was required to raise it from the 3rd to the 4th or appropriate from the 4th. So that by the destruction of the animal's own tissue, he is supplied with an amount of force for vitality, in excess of what was expended in the functions of nutrition¹⁰.

The manifestation of one force, necessarily implies the retirement of its equivalent of another. That we may have motion, heat must become "latent." So the life of one thing depends upon the death of another. From the simple elements bound together by Chemical affinity—the force passes up through the vegetable to the animal kingdom.

Some of my hearers may say, "What a cold mechanical view of life, the teachings of science would give us. This beautiful life of ours with its memories and its hopes, its joys and its sorrows, its loves and its enmities, its attainments and its aspirations—surely I would not care to live it, if I did not believe in the spiritual nature of these emotions. I would have no pleasure in feeling them if I thought they represented an equivalent of Heat, Light, Chemical affinity, etc." To such I would say, remember, I have only been speaking of that that life we have in common with the lower orders; by which we exist, grow and move. But if in the future (which does not seem impossible,) science should be able to represent our sensations

and thoughts in terms of physical force, I believe mankind would love life just as much and would be the happier for the new knowledge. I have never been able to understand why intelligent people should say that the teachings of science tend to deprive life and all nature of half their beauties. As though knowledge could detract from true beauty, anywhere. Why! the love of truth is a higher duty and a deeper feeling than the love of the beautiful—if indeed it be possible to separate them; and the thirst for knowledge and the pleasure in its acquisition are necessary attributes of the human mind¹¹. Is the rainbow less glorious in its beauty since science discovered it was but the dissection of white light as it passed through the raindrops? Would you love the rose and lily less because science told you the colors you so much admired depended on the arrangement of the atoms, by which certain rays of light were absorbed and certain others reflected to your eye? Would not the violet and heliotrope be as sweet if you knew what nature did in her laboratory to form the compounds that distilled through root and fibre to nourish it, and exhaled from stamen and petal in delirious perfume? Methinks that music would be more heavenly still if I knew the law by which the wondrous harmony is wrought. And I can not believe we would love life any the less nor would it be any the less worth living, if science should demonstrate that all phenomena in nature are but manifestations of the same force, and how step by step from nature's simplest forms,

“* * * Life's cup is passed
Up being's piled gradation,
Till men to angels yield, at last,
The rich collation.”

Science has solved many of what once were the mysteries of life. The greatest yet remains: the *purpose* of this life—the why and wherefore of this living.

“Between two worlds life hovers like a star
'Twixt night and morn, upon the horizon's verge;
How little do we know that which we are!
How less what we may be! The eternal surge
Of time and tide rolls on and bears afar
Our bubbles; as the old burst new emerge,
Lashed from the foam of ages; while the graves
Of empires heave but like some passing waves.”

The purpose of this life seems indeed "like a star" placed out beyond the reach of science. The light of it comes to us and we know the star is there. We know there is a purpose in this life. Beyond this science does not know. To know this would seem to be not a part of her mission—at least the mission of medical science. Let medical science take life just as she finds it, endeavor to understand the laws of our existence, our relations with the balance of creation; and let her labor to "make imperfect man comfortable." Here is work enough and a glorious purpose. Plato quoted Homer to show that the practice of the sons of Esculapius extended only to the cure of external injuries¹². If his deductions were right, how vast the difference between the tasks of ancient and modern medicine! There is hardly a step taken in human progress that does not feel the influence of medical science. There is scarcely a phase of our existence but what is affected by it. The construction of the houses you live in; the food you eat; the water you drink; the school-houses you are educated in; your education itself; the churches you worship in; the occupation you follow, and so on—all are subjects of investigation by medical men, whose duty it is to find everything that affects the life and health of man with the view to improving his condition. Indeed when I contemplate the important post held by the medical profession in this battle between life and death—this struggle for existence, I feel that it requires all our talents and energy and care to see that we do our duty well.

But I would not pretend to arrogate to the medical profession the exclusive knowledge of the laws affecting life and health. I would not have my non-medical hearers think there is a mysterious sanctum in which physicians sit as sole priests and none others dare enter.

While physicians devote their time and talents to this special study, their knowledge must be more thorough and they have a right to be considered the leaders of public opinion in such matters. But there is much for the people generally to know, much for them to do and much that physicians cannot do without them, in this struggle for existence.

I allude particularly to the prevention of disease. It has been too much the custom to leave all the thinking on this subject to physicians. This might possibly do, if they could enforce their ideas, but they are generally accused or suspected of doing unnecessary things and encroaching on the liberty of the individual when they propose reforms for the benefit of the public health¹³. This is because the people being generally ignorant of the laws of disease, do not see the value of the reforms. Even if the medical profession could induce the legislature to pass the most admirable laws for the protection of public health such laws would be worthless unless they were *en rapport* with the sentiment of the people. We must not neglect to show the people the advantage and even necessity of certain measures for self-protection.

Professor Chaille in a recent address on State Medicine, says: "This subject [the avoidable causes of disease and death] is so exhaustless and so little understood by the public, that I confess my impatience whenever a physician discourses to a public audience on any other subject¹⁴." But not only when the people are in mass, but in our daily intercourse with them, we should never lose opportunity of impressing on non-medical people the idea that many diseases are the result of carelessness or neglect as regards surroundings, and can be prevented. We are called to see a patient—we diagnose Typhoid Fever, we prescribe and treat the case to the end. But I venture to say that nine times out of ten we neglect any effort to trace the disease to its cause. I am convinced that if physicians would always use their best endeavors to trace, and, when they succeed in finding, point out to patrons, the causes of sickness, public opinion would very soon force legislation on many important points connected with public health. We should never lose opportunity of making public opinion in this way, if we really desire legislation on the subject. The importance of this subject of preventing disease, in our struggle for existence is strongly stated in the following language of a prominent Sanitarian which I take from the recent work entitled Hygiene and Public Health¹⁵. "The average length of human life may be very much extended and its physical power greatly augmented. Every year within this common-wealth,

thousands of lives are lost which might have been saved; tens of thousands of cases of sickness occur which might have been prevented. A vast amount of unnecessarily impaired health and physical debility exists among those not confined by sickness. These preventable evils require an enormous expenditure and loss of money, and impose upon the people unnumbered and immeasurable calamities—pecuniary, social, physical, mental and moral—which might be avoided. Means exist within our reach for their mitigation or removal. Measures for prevention will effect more than remedies for the cure of disease.” It is not a “theoretical possibility” but an “actual probability” that the total loss of life in this country from causes well known to be preventable is certainly over 100,000 annually¹⁶. This is the lowest estimate—most statisticians put it at double this. Now add to this the probable number constantly sick from preventable disease but who finally recover. Recoveries outnumber the deaths—we will say they amount to 150,000 more. This is a low estimate. So there are a quarter of a million of people annually lost to the productive efficiency of the United States from preventable diseases.

It is estimated by the most cautious and conservative sanitary statisticians that the loss in money value to this country on account of preventable sickness and death is over \$100,000,000 annually—leaving out the unusual losses of epidemics and injury to commerce¹⁷. Texas suffers her proportion of these losses. We congratulate ourselves that no epidemic of Yellow Fever has visited our fair state for many years; but Typhoid Fever and other preventable diseases have destroyed thousands of our fellow-citizens annually. The total population of the United States is about fifty millions. Texas doubtless has over a million and a half. But rather than over-estimate, let's put it at one and a quarter million—or one-fortieth of the total population of the United States. Her proportion then of the total preventable death is 2,500, annually; her proportion of the constantly sick is 3,750; her proportion of the money loss is \$1,250,000. Would it not be well for the political economist to consider what the state loses from her productive efficiency on account of prevent-

able disease? Would it not be well for the financier, when planning to save money to the state by re-placing a high with a low interest bond, for him to reflect how he might save her many thousands in money and thousands of lives by judicious investment for the public health. A political party agitates the introduction of a plank into its platform favoring state aid to induce immigration. We want more people, say they. They are needed to develop our state. But we should not lose sight of the importance of taking care of what we have already. It is as much the part of good management to secure and take care of the property we have as it is to invest judiciously to get more.

The losses I have spoken of are those from diseases, now known to be preventable. The question of their prevention is not an open one. When we attempt their prevention, it is not an experiment. Doubtless with the progress of Preventive Medicine, many others will be taken from the list not known to be preventable and added to the list of preventable diseases. The study of the laws of health and diseases, just as any other question in science is in great part by induction. Take the facts and from them generalize the law. He who discovers any law in nature is forever a benefactor of mankind. A discoverer never foresees the full benefit of his discovery on human progress. In order to study more thoroughly and systematically the laws of disease as it exists amongst us, it is necessary to have the facts recorded by as many intelligent observers as possible. The laws of disease understood, the means of preventing will surely follow. We will be able to protect ourselves from this class of diseases, just as surely as we can our dwelling from the lightning.

I believe that the day is passed when epidemic diseases were considered as a special visitation of divine vengeance and only to be removed by prayer and fasting. Those were sensible words of Lord Palmerston when the Cholera, after ravaging much of Europe, made its appearance in Scotland. The Scotch people stood dismayed and inactive before the awful thing. The Presbytery suggested to the English minister to proclaim a day of national prayer and fasting. Lord Palmerston answered that the af-

fairs of this world are regulated by natural laws, on the observance or neglect of which the weal or woe of mankind depends. It is by virtue of one of these laws that contagion spreads. Man, by exerting himself can disperse or neutralize these noxious influences. The appearance of cholera proves he has not exerted himself." "He thought activity preferable to humiliation when the plague was upon them. It was autumn, and before warm weather returned, they should be employed in destroying the cause of disease, otherwise pestilence would be sure to come and re-visit them in spite of all the prayers and fastings of a united but inactive nation¹⁸."

God works by law. Everything in nature must comply with it. He has made man capable of understanding these laws. Ignorance of the law will not excuse you in nature's court any more than in your temple of Justice yonder. Man is also endowed with power of invention so that he can place himself in harmony with his 'environment,' when he finds he is not so, and until he does it, God and nature will not violate a law for his special benefit. I hardly think I will be misunderstood as scoffing at religious observances. If I were so inclined, I should select another occasion than the present for my purpose. But I do proclaim against a fanaticism that would deprive man of his common sense.

If we should not sit idle when epidemics of Cholera and Yellow Fever threaten wholesale destruction of life, we should be only less vigilant, constantly; for there are other diseases, such as Typhoid Fever, Diphtheria, Small-Pox, Scarlet Fever, Hooping Cough, and many, many others—yes some disease for every season of the year; and they do terrible execution, notwithstanding their approach may be stealthy; and the steps of their progress almost imperceptible—while other epidemics come with their black banners flying over them.

What are the principal means to be adopted by man in the work of self-preservation?—I refer, of course, to means for preservation of health and prolongation of life.

1. He should endeavor to understand and carry out the laws of health as they affect him individually. These relate to the

food he eats, the clothes he wears, the kind and amount of work he does—in short, his habits of life. Every intelligent citizen should deem it a privilege and duty to inform himself as to the best means of preserving his health. It is morally wrong for him not to do so¹⁹. By doing so he increases his power for usefulness to himself, to his family and to society. The admirable Health Primers now being published²⁰ place within the reach and understanding of every man who can read, a fund of scientific knowledge on the subject of preserving health the value of which is incalculable.

2. But in matters of health as in everything else in the social organism, co-operation is necessary in any work to secure the greatest amount of success. There is a well defined and practical plan for voluntary co-operation among several individuals in sanitary matters which is the suggestion of Prof. Fleeming Jenkin, of Edinburgh²¹. It is called a Sanitary Protective Association. I can only indicate the outlines of the plan and must refer you for fuller information to the pamphlet that can be obtained by writing to Dr. H. R. Storer, Newport, R. I.²². The object of the organization would be to obtain as cheaply as possible, expert service of a sanitary engineer, in planning a house to be built, or improving the sanitary appointments of an old house, and obtaining plans for remedying any existing evils; analyzing your drinking water, and for making regular periodical inspections of your house and premises. You organize by electing a President, Secretary and Treasurer and Consulting Engineer. I believe the plan would work well in some of the cities of our state. The cost to each member would depend on the number of members and on the ability to get a competent engineer without sending a distance for him.

3. But the plan does not contemplate any power to enforce observation of sanitary rules. The truth is your health is often affected by your neighbor failing to observe the laws of hygiene with regard to his premises. So any plan is very imperfect that does not contemplate enforcing certain important sanitary rules. This is not only necessary as applied to the peasant or pauper, who, when we meet him in his rags, we expect to find living in a

miserable hut, with every unsanitary surrounding. But there are many people, particular about what they wear, who would be ashamed to show themselves with unshaven face or uncombed head; but who will allow piles of rubbish to accumulate about their premises, and slop to be thrown out of back windows for pigs to wallow in. Cleanliness in such things indicates genuine pride, even as much as your linen or your face. When people are as ashamed of unclean premises as they are of soiled faces they will be healthier. Very few in any community but would revolt at the thought of poisoning with arsenic their own or their neighbor's well, or insidiously forcing his family or his neighbor's to breathe noxious deadly vapor. Remorse would follow the act even though the deed had been accidental. I have often thought it would be well if remorse could follow the act of every one who poisons the air and water of a town by throwing garbage into back alleys, to fester and generate poisonous gases that infect the air, or compounds that rains wash into wells to poison them. The arm of the law should be invoked to protect citizens against anything that threatens their lives and property. The poor man's health is his only property. It is just as much the duty of the law to protect him in the enjoyment of this, as it is to protect others from burglars and thieves. Scarcely a town or city in the State that does not spend at least \$2,000.00 annually for policemen to guard its peaceful people against murderers, thieves, and rowdies that vex the drowsy ear. I do not know of one outside the large cities that spends so much to protect the would-be healthy citizen in the enjoyment of pure air, uncontaminated water and freedom from contagion.

There is a law-breaker that hides in your damp cellars and closets, that works in the night and is more to be feared than the burglar. There is an enemy in ill-constructed school houses, more stealthy than the pick-pocket, that would rob you of a treasure more precious than gold. There is a highwayman that waits for you where the narrow alleys cross your streets, to demand "your money or your life." It is not less

necessary to have policemen of a kind that can protect you against these enemies. I think it is at least an open question whether preventable diseases do not cause more injury to a city than would be suffered from outlaws were there no police. The State should not only protect all her children in their right to possess property; not only protect them in their right to enjoy life, by guarding them against murderers, but also protect them in the God-given right to enjoy good health. Listen to that astute, far-seeing English Premier, Disraeli: "The health of the people," says he, "is really the foundation upon which all their happiness, and all their power as a state, depend. It is quite possible for a kingdom to be inhabited by an able and active population. * * * "The health of the people" he goes on to say "is in my opinion, therefore the first duty of a statesman. There is no object of higher importance to engage the interests of society²³." Mr. Gladstone has frequently expressed himself to the same purpose. Englishmen are not enthusiasts nor so-called *theorists*. These two of her wisest, greatest statesmen, after a life devoted to the study of the state's prosperity and happiness, and the secret of its power, proclaim that the health of the people is the foundation of it all. They appreciate the importance of manufactories, improved agriculture, a commerce co-extensive with the known world; and an army and navy that can dictate to the strongest of the European powers. They compare England as she was in the 17th century without a sanitary system, to England as she now is, with the best sanitary system in the world; and in the light of history they proclaim that the *health of the people* is the *first* duty of a statesman.

Richelieu said that the secret of the power by which he had recreated France was justice. By justice, he had enabled his country to rise from the ashes of her ruins, and "soar Phoenix-like to Jove."

The modern statesman believes the secret of prosperity and power is the health of the people. And we trust the time is not far distant when he can point to the results of this faith,

in accomplished works ; when the laws of health and disease, as they are discovered, are applied to improving the condition of the citizens ; when they shall be borne up out of a polluted atmosphere where they breathe infection and wallow in contagion, and placed where they can breathe nature's "living, life-giving ether."

Yes, justice is necessary to the happiness of the people, none the less so is health. It is deemed necessary the State should have a Department of Justice. It should be deemed none the less necessary to have a Department of Health.

I shall not discuss the details of any plan. They have been gone over before this association year after year. Some of the objects in view, in organizing such a Department—you may call it a State Board of Health or what not—are :

1. To ascertain, with as much accuracy as possible, the condition of the people, as regards health, the prevalence of diseases, the kind, locality, and their causes.

2. To study the laws of the prevailing diseases in the light of statistics thus accumulated.

3. To report to the Governor and Legislature the result of the investigations, and recommend such legislation, from year to year as is deemed advisable to insure citizens the greatest amount of health. To carry out the first object, there should be registration of births, marriages, deaths and diseases. I say there should be a registration of diseases, and yet I know this would be the most difficult part of the whole plan. For it is a lamentable fact that the State permits many persons to practice medicine, and style themselves doctors, who have very little idea of distinguishing between diseases. All fevers are alike to them. But in spite of such ignorance a great deal can be done ; and I believe every year would find the statistics more and more valuable. The State Board of Health should have at least one of its members, the Secretary, who should devote his whole time to the duties of his office. He should be paid well enough to be independent of any practice. The other members should be paid only when on active duty.

There should be a county health officer in every county. Nearly every county has a county physician. Now if you will have him selected from among the best physicians, and add to his other duties that of compiling the registration statistics of the county, one great step will be gained. The State Board can furnish blanks to the county health officer to be in turn furnished to every practitioner in the county. These to be filled out every Saturday at noon and sent to the county health officer, he to discriminate between the reliable and the unreliable, compile and forward to State Board once a month. The most reliable statistics would be obtained from cities and towns, especially along the lines of railway, and these are the most important points to have them from; for these are the dangerous places where contagious and infective diseases threaten.

The State Board should have control of all matters involving danger of spread of disease from one town to another. Our quarantine system is defective; chiefly for want of facilities for handling cargo and caring for passengers during detention. To remedy this, there must be money supplied, either by the State or the National Government. The annually recurring local jealousies and quarrels should end. They not only tend to keep up undue excitement about epidemics, but they do immense unnecessary harm to commerce. Compared with health, commerce is of small importance, but it seems to me to have been often unnecessarily interfered with. Facilities for quarantine and some definite regulations with which all carriers can become familiar, would certainly be very desirable. I said that there should be *definite* quarantine regulations. I now add, they should be *uniform* for every port whose conditions are similar. There is no reason why every port on the Texas coast should not have the same quarantine regulations, after each shall be provided with proper stations etc. A central authority, as a State Board of Health should proclaim the regulations of all the ports, and without regard to the local prejudices that would prompt in this or that direction.

In our State where extreme quarantine views are often held, there are two dangers to be feared. One is a violent reaction to the other extreme. Every palpable injustice done by local health authorities tends to make converts to the opposition. Another danger is the losing sight of local sanitation in our implicit reliance on quarantine. I strongly believe in quarantine as one of the means of preventing the introduction and spread of certain diseases. But I do not hesitate to say that for every purpose, looking to the preservation of health, local sanitation is much more important than quarantine. The attention is not given to local sanitation which its importance demands. At the beginning of every summer, there is a sort of sanitary "boom." In the vernacular of the Stock Exchange, the "bulls" have it their way. Fear of yellow fever seizes the people and tosses their sanitary zeal until it is above every other consideration. The yellow fever season passed, the "bears" control the health market; the sanitary boom is ended; sanitary enthusiasm is pulled down, and bear-like it hibernates. Nothing more is heard of sanitation until another spring or summer. Now, there never was a greater mistake. The proper time, as every sanitarian knows, for doing the most effective work is during the winter. It is easier to prevent an epidemic than it is to stop it after it is begun. I would hope for an improvement in this particular under the influence of an efficient State Board of Health.

I would expect much from it, as an educator of our people in sanitary matters. England is in the van of sanitary work. By her system of registration; by the lectures of her sanitarians; by little popular works on health, the people have been enlightened on the subject of protecting their lives from disease. There "the health topic is often the social topic of the hour²¹." Our profession is personally interested in having the people generally enlightened upon this subject. Such knowledge enables them to better judge between the educated physician and the charlatan. In proportion as they appreciate the laws of health, will they de-

mand physicians thoroughly educated in the science and art of medicine.

I have probably wasted too much time arguing to an intelligent people, what they already know, the importance of health both to the individual and to the State. My object has been not so much to prove to you what you already know, but to kindle that passive belief into an active energy. If anything I have said shall induce more active interest in matters pertaining to the health of the individual and of the masses then my aim will have been accomplished. I have not traveled all over the State, and yet I have seen enough to assure me that our cities and towns are far from being in good sanitary condition. There are many existing local causes of disease that should be remedied. God grant the purification may come without the fire of an epidemic! We do not pretend that the most thorough system of sanitation would prevent all diseases—far from it. There are many diseases that depend on hereditary constitution that will require ages of education and inheritance to eradicate. Nor are conservative physicians prepared to adopt the views I have recently seen attributed to some enthusiastic social scientist, that the time would come when under the enlightenment of science, the physical and moral condition of man would be so far perfected, that there would no longer be need of physicians or lawyers. That might be a glorious time, but when and how shall we reach it?

“Utopia is a pleasant place, but how shall I get there?”

Straight down the crooked lane, and all around the square.”

No, we cannot expect to make man perfect but we ask that all possible means be used to relieve the sufferings of imperfect man. You must not blame physicians if year after year they repeat this with a persistence that may seem to laymen as almost born of fanaticism. They *are* in earnest. They are educated enemies of suffering. Day after day a “Litany of [pain] is constantly sounding in their ears.” From the day the physician begins his studies, he is the sworn active enemy of disease. He pores over musty records to find some may be forgotten remedy. With scalpel and microscope, he

bids Death reveal his secret. He ransacks earth, sea and air; all the known kingdoms of creation, all climes, all countries, all ages, in his search for weapons to fight this enemy. The best of his thoughts are given to the work, from the day he opens his first book to study the mechanism of this wondrous frame, to the day when his own frame like a worn piece of machinery will no longer obey the engineering will; the best of his energies are enlisted in the cause from the hour when, beaming with hope and life, he offers his sword to Nature in her war with Disease and Death, to the hour when borne down in the conflict Nature bids him sound parley for a truce with Death; the deepest of his feelings are devoted to the duty from the moment he kneels before the altar in the temple dedicated to healing, to the moment when he would flee to it, but temple nor altar will give him refuge from the monster, Death. And so, fellow-man, education and daily habit of thought and labor make physicians the active antagonists of these enemies of mankind. They would relieve suffering wherever they find it and they would prevent disease and death whenever they are able. You solicit and accept their advice and drugs to obtain present comfort, will you not also accept their counsel when they warn you how to prevent pain and prolong the existence for which Nature teaches us to struggle?

Fellow-members, the time is at hand when I shall surrender, to a successor worthier of them, the honors, duties and responsibilities conferred on me. If I have not altogether failed in the discharge of my duties, the result is rather due to your patience and courtesy than any ability of my own. I have felt the lack of ripe experience that would bring wisdom to your councils. I have tried to supply this deficiency as best I could by *earnest efforts* to advance the interests of the Association—deeply desiring its success, and feeling an unfaltering faith in its future. The great Dr. Gross, standing on a pinnacle from which he looked back over a half a century of medical science—enraptured by the sight of its progress—exclaims: “Oh! for a glance at the profession a half a century

hence, when man enlightened and refined by education and redeemed from the thralldom of ignorance and superstition, shall reflect more perfectly the image of his maker²¹.' I feel like applying the thought to-night and saying: Oh! for a glance at this association in the years to come. Will it be truly the exponent of the medical talent of this State? Will its influence be always toward advancing medical science, elevating the profession, and encouraging good-will amongst its members? Will it be such a body that the people of the State can look to it as authority, and for advice and guidance in matters of public health? Will its annual sessions be such occasions as that its members eagerly flock to them in search of new discoveries and scientific truths, and return home better physicians and better men? Will it be such a body that we shall all be proud to call ourselves members of it? I believe the heart of every one of us fondly wishes it may be all these. The interest shown in the present meeting, the large number of papers contributed, and the general participation in the discussions of them, all indicate your zeal, and give promise of, if they do not insure, the successful future of the Association.

Ladies and gentlemen, I thank you for the patience with which you have listened to me. I pray that the interest you have manifested in our Association may never lessen. I pray that the Association may never do aught to forfeit that interest. I pray that she may never be false to the career on which she was started by the Washington County Medical Society. May she keep step with the progress of our State. May her influence be felt in guiding that progress. And when the day comes that our prairies shall be as a succession of gardens; our railways so many chains of towns and cities woven and interwoven over the surface of this fair State—chains that shall make her forever indivisible—may our Association be able to point to some work she has done in accomplishing that prosperity. Her recompense will be in a sense of duty done, and the just acknowledgments of an active, law-abiding, moral, healthy, prosperous and happy people.

May you, my hearers, live to see it and be among the happiest of all.

REFERENCE NOTES.

1. PAGE 1.

"That relation which in free nature influences the forms of animals and plants, by selecting and transforming them, is called by Darwin the Struggle for Existence." History of Creation.—Haeckel, Vol. 1, page 160.

There is no pretense of treating the subject according to the definition of Darwin. The term 'Struggle for Existence' is rather made the "watchword" of an effort in behalf of Preventive Medicine.

2. PAGE 3.

The Mystery of Pain.—Hinton.

Rest and Pain.—Hilton.

Data of Ethics —Herbert Spencer. Page 174, et seq.

3. PAGE 3.

"Sentient existence can evolve only on condition that pleasure-giving acts are life-sustaining acts."—Spencer, *op. cit.*

4. PAGE 3.

Bichat.

5. PAGE 4

Correlation and Conservation of Forces ; Essays by Mayer, Grove, and others. Page 408.

6. PAGE 4.

Ibid. Page 406.

7. PAGE 5

Ibid. Page 364.

8. PAGE 5.

Carpenter.

9. PAGE 5.

Prof. Joseph LeConte in the American Journal of Sciences, Nov-1859. Page 306.

10. PAGE 6.

Ibid. Page 315.

11. PAGE 7.

"As the eye is made for seeing and the ear for hearing, so the human mind is formed for exploring and understanding the relationship of natural phenomena." Heat as a Mode of motion.—Tyndall. Page 1.

"If man's intellectual nature thirsts for knowledge, then knowledge is useful because it satisfies this thirst. If you demand practical ends, you must, I think, expand your definition of the term practical and make it include all that elevates and enlightens the intellect as well as all that ministers to the bodily health and comfort of man."—Life of Faraday.—Tyndall. Page 34.

"Flower in the crannied wall
I pluck you out of the crannies;
Hold you here, root and all, in my hand,
Little flower—but if I could understand
What you are, root and all, and all in all,
I should know what God and man's."—Tennyson.

12. PAGE 8.

Plato's Republic, Book III.

Macaulay's Essay on Bacon's Philosophy.

13. PAGE 9.

"The Friends of the Typhoid Fever patient, who will not fail to remember and to be grateful for the care and assiduity with which a physician may have treated the disease, would probably have thought him intrusive and troublesome, had he taken one-half the same trouble to see that the cause of the fever was prevented."

14. PAGE 9.

Address delivered before the Louisiana State Medical Society, April 10th, 1879.

15. PAGE 9.

Hygiene and Public Health.—Edited by Albert H. Buck, M. D. Vol. 1, page 4.

16. PAGE 10.

Ibid. Vol 1, page 5. Introduction by J. S. Billings, M. D., U. S. A.

17. PAGE 10.

Ibid. Page 6.

18. PAGE 12.

History of Civilization in England.—Buckle. Vol. 2, page 467.

19. PAGE 13.

"While recognizing the fact that in our state of transition, characterized by very imperfect adaption of constitution to condition, moral obligation of supreme kinds often necessitate conduct which is physically injurious; we must also recognize the fact that considered apart from other effects it is immoral so to treat the body as in any way to diminish the fullness or vigor of its vitality."—Spencer, *op. cit.*

20. PAGE 13.

These Health Primers are published in this country by Harper & Bros., New York City, and Presley Blakiston, Philadelphia, at a cost of fifty cents per vol., and relate to almost everything that tends to preserve the health, written in simple language, by scientific men.

21. PAGE 13.

"Sanitary Protection originated in Scotland in the year 1878, and was the conception of Fleeming Jenkin, Professor of Engineering in the University of Edinburgh."—H. R. Storer, M. D.

22. PAGE 13.

See also report by Dr. Storer on the new principle of "Protective" (private) Sanitation in its relations to Public Hygiene, made to the section on State Medicine, American Medical Association, Session 1879. Vol. 30, page 357, of the Transactions of the Association.

23. PAGE 15.

Address, June, 1877, on the occasion of opening model houses for workingmen.

24. PAGE 18.

Ministry of Health.—Richardson. Page 4.

25. PAGE 20.

Address by Prof. S. D. Gross, M. D., at the banquet given by the physicians of Philadelphia on the occasion of his 75th birthday.

